



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,836	11/13/2003	Mark R. Gordon	CHA920030026US1	9524
23550 7590 06/13/2007 HOFFMAN WARNICK & D'ALESSANDRO, LLC 75 STATE STREET 14TH FLOOR ALBANY, NY 12207			EXAMINER BELL, CORY C	
			ART UNIT 2164	PAPER NUMBER
			MAIL DATE 06/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/712,836	Applicant(s) GORDON, MARK R.	
	Examiner Cory C. Bell	Art Unit 2164	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 17 April 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-13, 15-21 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13, 15-21 and 23-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

  
**SAM RIMELL**  
**PRIMARY EXAMINER**

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-4, 6-13, 15-21, and 23-26 have been examined.

#### *Response to Arguments*

2. Applicant's arguments with respect to 35 USC 101 have been considered. The rejection of claims are withdrawn.

3. Applicant's arguments with respect to 35 USC 103 are not persuasive. Applicant incorrectly asserts that Brickell fails to teach a performance measure that is a combination of time saved and a summary table size. This feature is shown in the passage cited in the previous office action as the performance measure is generated by retrieving the actual time saved, if the summary is already in use, or else the measure is generated using an estimate of the time saved calculated by the summary table size. Using one or the other is a combination using the broadest reasonable interpretation and thus the rejection stands. Applicant should also note col 8 lines 35-56.

Second, Applicant asserts that Brickell fails to teach using subsets of characteristics to generate performance data, the claim limitation being referred to reads "performance data of execution queries using subsets of characteristics found in each proposed summary table." It is noted the definition of subset is(Wikipedia.org):

If  $A$  and  $B$  are sets and every element of  $A$  is also an element of  $B$ , then:

- $A$  is a subset of (or is included in)  $B$ , denoted by  $A \subseteq B$ ...

Thus using one or all(all being denoted by the equal sign) of the characteristics is using a subset.

Also, applicant is directed Col 7 lines 24-29 which shows inexact match summary tables.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 6-12, 15-21, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,385,604, known hereafter as Bakalash, or the admitted prior art in view of US 6,678,676 known hereafter as Brickell.

6. **Claims 1 and 10** are rejected for the following reasons:

Bakalash teaches summery tables for use in an OLAP database system in col 6, as does applicants admitted prior art in paragraphs 2-4 of the instant application. However, neither disclose proposing summary tables and calculating performance measures, but these features are taught in Brickel. Col 3 lines 16-37 teaches calculating an estimate the query execution time witch is a performance measure based on inputted queries, and a query analysis system generating the selected summaries, based on the data from the database i.e. the estimated query processing time calculated by analyzing performance data of execution queries using characteristics relating to each proposed summary table and performance data of execution queries using subsets of characteristics found in each proposed summary table. (Also note Col 6 lines 16-24, Col 7 lines 24-29, and Col 8 lines 35-56). It is also noted that Thus, it would have been obvious to one of ordinary skill in the art at the time of the art to include the features of Brickel in Bakalash as it provides an automatic process that does not require substantial input

Art Unit: 2164

from the system user or system administrator for maintaining summery tables(Brickel col 3 line 59 – col 4 line 4). Brickel also teaches the display of the summary tables in col 3 lines 34-35, where an administration selects and monitors the summaries. As, the tables must inherently be displayed in order to be selected. Thus, it would have been obvious to one of ordinary skill in the art at the time of the art to include the features of Brickel in Bakalash as it provides an automatic process that does not require substantial input from the system user or system administrator for maintaining summery tables(Brickel col 3 line 59 – col 4 line 4).

7. **Claims 2, 11, and 20** are rejected for the following reasons:

Bakalash and The admitted prior art as modified teaches the claims upon which these claims are dependant, however they fail to expressly disclose the set of summery tables being determined based on characteristics utilized in the summary table. However, this is taught in Brickel col 6 line 16-46. Thus, it would have been obvious to one of ordinary skill in the art at the time of the art to include the features of Brickel in Bakalash as it provides an automatic process that does not require substantial input from the system user or system administrator for maintaining summery tables(Brickel col 3 lines 59 – col 4 line 4).

8. **Claims 3, 12, and 21** are rejected for the following reasons:

Bakalash and The admitted prior art as modified teaches the claims upon which these claims are dependant, however they fail to expressly disclose the performance measure comprising an estimated amount of time saved for using the summary table. However, this is taught in Brickel col 3 line 21-24. Thus, it would have been obvious to one of ordinary skill in the art at the time of the art to include the features of Brickel in Bakalash as it provides an automatic process that

Art Unit: 2164

does not require substantial input from the system user or system administrator for maintaining summary tables (Brickel col 3 line 59 – col 4 line 4).

9. **Claim 19** is rejected for the following reasons:

See Claim 1 rejection, and Brickell Col 2 lines 18-21,

10. **Claims 6, 15, and 23** are rejected for the following reasons:

Bakalash and The admitted prior art as modified teaches the claims upon which these claims are dependant, however they fail to expressly disclose the performance measure being normalized for summary tables based on different fact tables. However, this is taught in Brickel col 8 lines 35-44 shows a performance measure based on the number of rows reduced to over the number of rows for the table/tables being represented, and the number of rows is performance data as it is analogous to how long it takes to parse a table, this is a normalized figure and summary tables are based on different tables. Thus, it would have been obvious to one of ordinary skill in the art at the time of the art to include the features of Brickel in Bakalash as it provides an automatic process that does not require substantial input from the system user or system administrator for maintaining summary tables (Brickel col 3 line 59 – col 4 line 4).

11. **Claims 7, 16, and 24** are rejected for the following reasons:

Bakalash and The admitted prior art as modified teaches the claims upon which these claims are dependant, however they fail to expressly disclose a performance analysis system that determines an actual performance analysis system that determines an actual performance value of a given summary table using feedback from the database system. However, this is taught in Brickel col 2 line 62- col 3 line 15. Thus, it would have been obvious to one of ordinary skill in the art at

Art Unit: 2164

the time of the art to include the features of Brickel in Bakalash as it provides an automatic process that does not require substantial input from the system user or system administrator for maintaining summery tables(Brickel col 3 line 59 – col 4 line 4).

12. **Claims 8, 17, and 25** are rejected for the following reasons:

Bakalash and The admitted prior art as modified teaches the claims upon which these claims are dependant, however they fail to expressly disclose a comparing statistics fro queries using identical characteristics that are preformed before and after creation of the summery table.

However, this is taught in Brickel col 2 line 62- col 3 line 15, which compares the same query performed with and without the summary table present. Thus, it would have been obvious to one of ordinary skill in the art at the time of the art to include the features of Brickel in Bakalash as it provides an automatic process that does not require substantial input from the system user or system administrator for maintaining summery tables(Brickel col 3 line 59 – col 4 line 4).

13. **Claims 9, 18, and 26** are rejected for the following reasons:

Bakalash and The admitted prior art as modified teaches the claims upon which these claims are dependant, however they fail to expressly disclose deleting low performing summary tables.

However, this is taught in Brickel col 4 lines 5-10 or Col 7 lines 5-10. Thus, it would have been obvious to one of ordinary skill in the art at the time of the art to include the features of Brickel in Bakalash as it provides an automatic process that does not require substantial input from the system user or system administrator for maintaining summery tables(Brickel col 3 line 59 – col 4 line 4).

Art Unit: 2164

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,385,604, known hereafter as Bakalash, or the admitted prior art in view of US 6,678,676 known hereafter as Brickell in further view of US 6,317,778, known hereafter as Dias.

14. **Claim 4** is rejected for the following reasons:

Bakalash and Brickell teach the claims upon which claim 4 is dependent upon, but fail to expressly disclose the multiplication of the time saved and the summary table size. Using a performance measure that is a multiplication of size and time saved is taught in Dias Col 5 lines 32-46. Division is a type of multiplication (ie multiplication by an inverse). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include this feature to normalize the time saved by the size as they both effect the performance of the system and thus they measure would be more accurate.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cory C. Bell whose telephone number is (571) 272 2736. The examiner can normally be reached on m-f 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272 4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2164

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
SAM RIMELL  
PRIMARY EXAMINER